

TABLE OF CONTENTS

PREFACE	i
SECTION I: INTRODUCTION	1
Farm Planning and Site Development	1
Technologies	2
SECTION II: DEFINITIONS	4
SECTION III: DETERMINING ACCEPTABLE LOCATIONS FOR LIVESTOCK PRODUCTION FACILITIES	5
Category 1 Sites - Sites normally acceptable for livestock production facilities	5
Category 2 Sites - Sites where special technologies and/or management practices could be needed to make new and expanding livestock production facilities acceptable	8
Category 3 Sites - Sites are not acceptable for new and expanding livestock production facilities	9
SECTION IV: DEVELOPING A SITE PLAN AND A MANURE MANAGEMENT SYSTEM PLAN	11
SECTION V: SITE REVIEW AND VERIFICATION PROCESS	13
SECTION VI: REFERENCES	16

GENERALLY ACCEPTED AGRICULTURAL AND MANAGEMENT PRACTICES FOR SITE SELECTION AND ODOR CONTROL FOR NEW AND EXPANDING LIVESTOCK PRODUCTION FACILITIES

SECTION I. INTRODUCTION

In 1999, the Michigan legislature enacted P.A. 261, which amended the Michigan Right To Farm Act. P.A. 261 requires the establishment of Generally Accepted Agricultural and Management Practices for Site Selection and Odor Control for New and Expanding Livestock Facilities. These Generally Accepted Agricultural and Management Practices (GAAMPs) are written to fulfill that purpose and to provide uniform, statewide standards and acceptable management practices based on sound science.

FARM PLANNING AND SITE DEVELOPMENT

The GAAMPs for site selection and odor control for new and expanding livestock production facilities are intended to fulfill three primary objectives:

- 1) Environmental Protection
- 2) Social Considerations (neighbor relations)
- 3) Economic Viability

When all three of these objectives are met, the ability of a farm operation to achieve agricultural sustainability is greatly increased.

Farm planning involves three broad phases: Collection and analysis (understanding the problems and opportunities); decision making; and implementation. Collection and analysis includes: determining objectives, inventorying resources and analyzing data. Decision support includes formulating alternatives, evaluating alternatives and making decisions. The final step is implementation.

Producers should utilize recognized industry and university professionals in the evaluation of the economic viability and sustainability of constructing new or expanding existing livestock production facilities. This evaluation should be comprehensive enough to consider all aspects of livestock production including economics, resources, operation, waste management and longevity.

The decision of where to site a livestock production facility can be based on several objectives including: preserving water quality, minimizing odor, working with existing land ownership constraints, future land development patterns, maximizing convenience for the operator, maintaining esthetic character, minimizing conflicts with adjacent land uses and complying with other applicable local ordinances. The environmental objectives of these GAAMPs focus specifically on water quality protection and odor control, and how environmental and management factors affect the suitability of sites for livestock

the adoption of new technologies to control odor offer a means for reducing odor from livestock production facilities and manure storage facilities, thus broadening the area within which livestock production facilities may be appropriately sited.

Odor reduction technologies include, but are not limited to, vent biofilters, manure storage covers and composting. Each technology presents different challenges and opportunities. These should be considered during the planning process for a new or expanding animal livestock facility. Management activities for odor control are outlined in the GAAMPs for Manure Management and Utilization.

The Minnesota Odor Estimator Model is available as a component of the planning process. For new sites, this will aid in identifying non-farm residences that may be impacted by the site and whether the location or technology proposed for the new facility will minimize the impact on non-farm residences. For sites of expanding livestock production the model will aid in the planning to identify additional non-farm residences that may be affected by the expanding operation and whether location or technology can minimize the impact on additional residences. The use of the Minnesota Odor Estimator Model will alert the producer to potential conflicts while still in the planning process. The Minnesota Odor Estimator model is available from MSU Extension, consultants, and MDA's Website (<http://www.michigan.gov/mda>)

The goal for effective odor management is to reduce the frequency, intensity, duration and offensiveness of odors that neighbors might experience. Because of the subjective nature of human responses to certain odors, recommending appropriate technology and management practices is not an exact science. Since site selection for livestock production facilities is an important factor in managing, and therefore, minimizing potential for odor impacts upon neighbors, site selection for new and expanding residential housing should consider setbacks to avoid potential land use conflicts.

Generally Accepted Agricultural and Management Practices for Site Selection and Odor Control for New and Expanding Livestock Production Facilities will help determine the suitability of sites for livestock production facilities. These GAAMPs provide a planning process that can be used to properly plan new and expanding facilities to increase the suitability of a particular site and enhance neighbor relations.

Table 1. Animal Unit Equivalents

Animal Units	50	250	500	750	1,000
Animal Type ¹	Number of Animals				
Slaughter and Feeder Cattle	50	250	500	750	1,000
Mature Dairy Cattle	35	175	350	525	700
Swine ²	125	625	1,250	1,875	2,500
Sheep and Lambs	500	2,500	5,000	7,500	10,000
Horses	25	125	250	375	500
Turkeys	2,750	13,750	27,500	41,250	55,000
Laying Hens or Broilers	5,000	25,000	50,000	75,000	100,000

All other animal classes, types or sizes (eg. Nursery pigs) not in this table, but defined in the Michigan Right to Farm Act or described in Michigan Commission of Agriculture Policy, are to be calculated as one thousand pounds live weight equals one animal unit.

² Weighing over 55 pounds.

SECTION III - DETERMINING ACCEPTABLE LOCATIONS FOR LIVESTOCK PRODUCTION FACILITIES

All potential sites for new and expanding livestock production facilities can be identified by three general categories. These are:

Category 1. Sites normally acceptable for livestock production facilities.

Category 2. Sites where special technologies and/or management practices could be needed to make new and expanding livestock production facilities acceptable.

Category 3. Sites that are not acceptable for new and expanding livestock production facilities.

Category 1 Sites: Sites normally acceptable for livestock production facilities.

Category 1 sites are those sites which have been traditionally used for agricultural purposes and are in an area with a relatively low residential housing density. These sites are located where there are 7 or fewer non-farm residences within ¼ mile from a livestock production facility with up to 749 animal units, and 7 or fewer non-farm residences within ½ mile from a livestock production facility with 750 animal units or greater. New and expanding livestock production facilities should only be constructed in areas where local zoning allows for agriculture uses.

Table 3. Category 1 Site Setbacks, Verification and Notification – Expanding Operations

Total Animal Unit	Expanding Operations Non-Farm Residences within Distance	Property Line Setback¹	MDA Site Review and Verification Process	Local Unit of Government Notification²
50-249	0-7 within ¼ mile	125 ft	Upon Producer Request ³	Yes
250-499	0-7 within ¼ mile	200	Upon Producer Request ³	Yes
500-749	0-7 with ¼ mile	200 ft	Yes	Yes
750-999	0-7 with ½ mile	200 ft	Yes	Yes
1000 or more ⁴	0-7 within ½ mile	300ft	Yes	Yes

¹May be modified upon written request based upon the Minnesota Odor Estimator Model utilizing the 95% odor annoyance free requirement, proximity to existing non-farm residences, adjacent land use and management technologies implemented at the livestock production facility.

²If proposed expansion is on a township boundary, the adjacent township will be notified.

³To be afforded nuisance protection under these GAAMPs producers must conform to all requirements of the GAAMPs but are not required to complete the site review and verification process if less than 500 animal units.

⁴Operations exceeding 3500 animal units may be required to implement further odor reduction special technologies and/or management practices.

Table 5. Category 2 Site Setbacks, Verification and Notification – Expanding Operations

Total Animal Units	For Expanding Operations Non-Farm Residences within Distance	Property Line Setback¹	MDA Site Review and Verification Process	Local Unit of Government Notification²
50-249	8- 20 within 1/4 mile	125 ft	Upon Producer Request ³	Yes
250-499	8- 20 within 1/4 mile	200ft	Yes	Yes
500-749	8- 20 within 1/4 mile	200 ft	Yes	Yes
750-999	8- 20 within 1/2 mile	250 ft	Yes	Yes
1000 or more	8- 20 within 1/2 mile	300 ft	Yes	Yes

¹ May be modified upon written request based upon the Minnesota Odor Estimator Model, utilizing the 95% odor annoyance free requirement, proximity to existing non-farm residences, adjacent land use and management technologies implemented at the livestock production facility.

²If proposed expansion is on a township boundary, the adjacent township will be notified.

³To be afforded nuisance protection under the GAAMPs producers must conform to all requirements of the GAAMPs but are not required to complete the site review and verification process if less than 250 animal units.

As part of the review and evaluation of the proposed site plan, MDA will determine if these GAAMPs are being utilized and if appropriate technology and management practices are included in the plan.

Category 3 Sites: Sites not appropriate for new and expanding livestock production facilities.

New and expanding livestock production facilities should not be constructed in areas where local zoning does not allow for agriculture uses. Any proposed site with more than the maximum number of non-farm residences specified in Table 4 for a new operation and Table 5 for an expanding operation is a Category 3 site. New and expanding livestock production facilities are inappropriate for that site. Additionally, the following categories are considered unacceptable for construction of new and expanding livestock production facilities.

1. Wetlands - New and expanding livestock production facilities shall not be constructed within a wetland as defined under MCL 324.30301 (NREPA, PA 451, as amended).
2. Floodplain - New and expanding livestock production facilities and manure storage facilities shall not be constructed in an area where the facilities would be inundated with surface water in a 25 year flood event.

residential use where agriculture uses are excluded. Existing livestock production facilities may be expanded within 1500 feet of areas zoned for residential use with approval from the local unit of government.

SECTION IV. - DEVELOPING A SITE PLAN AND A MANURE MANAGEMENT SYSTEM PLAN

Site Plan

A Site Plan is a comprehensive layout for a livestock production facility, and includes a base map(s) to scale of the property illustrating the following features:

- Property lines, easements, rights-of-way, and any deed restrictions.
- Public utilities, overhead power lines, cable, pipelines, and legally established public drains.
- Positions of buildings, wells, septic systems, culverts, drains and waterways, walls, fences, roads, and other paved areas.
- Location, type and size of existing utilities.
- Location of wetlands, streams and other bodies of water.
- Existing land uses for contiguous land.
- Names and addresses of adjacent property owners.
- Basis of livestock production facility design (i.e. NRCS; Midwest Plan).
- A soils map of the area where all livestock production facilities are located.
- Location and Distance to the non-farm residences within one-half mile.
- Location and Distance to the nearest residentially zoned area.
- Topographic map of site and surrounding area.

Manure Management System Plan

The Manure Management System Plan describes the system of structural, vegetative and management practices that the owner/operator has chosen to implement on the site for all proposed new and existing facilities. Items to address in the manure management system plan are described in the GAAMPs for Manure Management and Utilization. The manure management system plan will include the following components:

- Sufficient land, or have access to sufficient land for the proper collection, storage, treatment, transfer and utilization of the manure and other by-products generated.
- Polluted runoff and leachate from manure and feed should be collected and transferred to storage or treatment facilities and should be utilized in an environmentally acceptable manner.
- Planning and installation of manure management system components to ensure proper function of the entire system.

Additional information on potential adverse impacts to surface and groundwater and preventative measures to protect these resources are identified in a CNMP. Although the CNMP provides the framework for consistent documentation of a number of practices, the CNMP is a planning tool not a documentation package.

Odor management is included in both the MMSP and CNMP.

Implementation of an MMSP is ongoing. A CNMP Implementation Schedule typically includes long-term change. These often include installation of new structures and/or changes in farm management practices that are usually phased in over a longer period of time. Such changes are outlined in the CNMP Implementation Schedule, providing a reference to the producer for planning to implement changes within their own constraints. As is described above, a producer with a sound MMSP is well on their way to developing a CNMP. Time spent developing and using a MMSP will help position the producer to ultimately develop a CNMP on their farm, if they decide to proceed to that level or when they are required to do so.

WHO NEEDS A CNMP?

As of January 1, 2003 farms with 1000 Animal Units (AU) or more must develop a CNMP. This date refers to when Michigan adopted an NPDES general permit for farms and farm operations with 1000 AU or more. Any farm that has had a Department of Environmental Quality (DEQ) documented discharge to surface water is required to develop a CNMP. Farms with 1000 AU that have had a documented discharge beginning from January 14, 2000 are also required to apply for coverage under the general permit. Any 1000 AU farm that has not had a documented discharge has a choice; they can either choose to apply for coverage under the NPDES general permit or to be a part of the Michigan Agriculture Environmental Assurance Program (MAEAP). Each decision requires the development of a CNMP.

For additional information regarding the permit go to: www.michigan.gov/deq.

For additional information regarding MAEAP go to: www.maeap.org or call 517-241-4063

SECTION V - SITE REVIEW AND VERIFICATION PROCESS

Siting Request Process:

The GAAMPs for site selection and odor control for new and expanding livestock production facilities are applicable for producers with new and expanding livestock production facilities with a capacity of 50 animal units or greater (see Table 1), who are seeking nuisance protection under the Right to Farm Act. Producers with facilities that require MDA verification in categories 1, 2, or 3 should contact the MDA and begin the site selection review and verification process prior to the construction of new livestock production facilities and expansion of existing livestock production facilities.

conformance with this GAAMP. The facility must be completed in conformance with the verification request proposal.

Notification to Local Unit of Government:

MDA will notify the local unit of government of all proposed livestock production facility siting requests and of all determinations made regarding the status of a siting request for siting a new or expanding livestock production facility.

Review Process:

If either the owner of the proposed livestock production facility, or any surrounding neighbor within one mile of the proposed facility or the local unit of government disagrees with the results of the review and verification process, they may request MDA's decision be reviewed by the Michigan Commission of Agriculture within 60 days of the date the decision was issued. The request shall be in writing and include supporting documentation. MDA will review the supporting documentation and then will consult with at least three recognized professionals in the siting and management of livestock production facilities and odor control practices as listed below to further evaluate the proposed siting request. MDA will notify the professionals of the request. The professionals shall review and report a recommendation on the proposed siting request to the Commission of Agriculture within 60 days of receipt of the notification form to MDA. An extension may be granted by the Commission of Agriculture. The final decision rests with the Michigan Commission of Agriculture. This review process is created solely for the purpose of this specific GAAMP, and the Administrative Procedures Act does not apply.

Recognized Professionals:

Recognized professionals in the siting and management of livestock production and odor control practices may include, but are not limited to personnel from the following:

- a. Conservation Districts
- b. Industry Representatives
- c. Michigan Department of Environmental Quality
- d. Professional Consultants and Contractors
- e. Professional Engineers
- f. United States Department of Agriculture Natural Resources Conservation Service
- g. University Agricultural Engineers and other University Specialists

The site review and verification process will be conducted in accordance with MDA procedures and protocol.

REVIEW COMMITTEE

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